THE GENESEE FARMER.

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N. GOODSELL, EDITOR.

EFFECTS OF WINTER.

We have been favored by Judge BUEL, of Albany, with observations made by himself upon the effects of the winter past on fruit and forest trees, both in the orchard and in the nursery, which we deem of the utmost importance to the public. He is at this time largely engaged in the cultivation of fruit and forest trees, flowering shrubs and plants, and observations from him may be considered as of first authority. We place his observations under the editorial head, to accompany each article with observations of our own, made at this place, to enable our readers the more readily to make their comparisons as to the climate of the two places.

"OBSERVATIONS ON THE EFFECTS OF THE WINTER UPON PLANTS, AT THE ALBANY NURSERY.

"*Location.*—Three miles west of Albany, and at an elevation of from two to three hundred feet above the Hudson River.

"*Soil.*—Sand and sandy loam, with occasional patches of bog earth and clay. To the west and north, unimproved sandy commons, abounding in marshes, and pretty much divested of timber. Greatest degree of cold, 18 deg. below zero, or 50 deg. of frost."

Location of Rochester.—On the Genesee River, six and a half miles south from Lake Ontario, at an elevation of about two hundred and thirty feet above the level of the lake.

Soil.—Varying from sandy calcarious to clayey loam, resting upon a superstratum of geodiferous lime rock. Face of the country east, west and south, generally flat, with small undulations; on the north descending to the lake, not much cleared, timber pine and oak, soil more light and sandy. Greatest degree of cold the winter past, 4 deg. below zero, at sunrise on the morning of the 7th of February; the mean temperature for that month was 23 deg. 9-10.

"*Peaches.*—Blossoms generally destroyed. Trees on the north side of a high board fence, and on the east side of a dwelling house, showed most blossoms; one the least exposed to heat, and both least exposed to sudden alterations of temperature—which sudden changes I deem most destructive to vegetable vitality. Several branches which were apparently buried in a snow-bank, were loaded with blossoms. Old trees have generally a sickly appearance, and many, as upon the borders of the Hudson, died. Nursery trees healthy, with the exception of a few on a wet piece of ground."

In the neighborhood of Rochester, the peach trees were not injured by the winter—blossomed very full, and now bid fair for a plentiful crop of fruit.

"*Apricots.*—Many young trees in the Nursery partially or wholly killed, in sections where the peaches were not affected. Old trees healthy, and blossomed fair, particularly on the upper branches. For three winters the blossoms near the ground have been destroyed, while those at the tops have been but partially or not at all affected. I impute the circumstance to the great changes of temperature which take place near the surface of the ground."

Both young and old trees have not been injured at this place. Old trees have blossomed very full, and the young fruit is now the size of Almond kernels. Both hard and soft shelled Almonds have withstood the winter perfectly; those of the soft-shelled of the last year's growth were fresh quite to the points of the limbs.

"*Pears and Plums.*—Many tops of Nursery trees of vigorous growth killed, mostly on a southern aspect. Some varieties of both, apparently the most hardy, remained without injury. The injury probably owing to a late vigorous growth, and the wood not having become well ripened and hardy, from the confined location in the nursery rows, when the severe weather set in. Old trees uninjured. The Pear has an abundant show of blossoms, the Plum but a scanty one."

Both Pear and Plum trees, young and old, have passed the winter without the least injury by frost in this neighborhood, and bid fair to produce an abundant crop. The Plums rarely fail with us, only as they are destroyed by the curculio.

"*Ailanthus*, (Tree of Heaven) a native of China. The last year's growth (which was ordinarily from four to ten feet) killed by the winter. The preceding year's growth, the root and collar uniformly uninjured and sending out shoots."

This tree has endured our climate the past winter without the least injury, the young shoot having put out quite to the points of the limbs; even young trees that were transplanted last fall are uninjured by the frost.

"*Bignonia, (radicans)* both in the nursery and trained against a wall, but partially or not at all injured. *B. grandiflora* equally hardy.

These stand the climate of Rochester well.

"*Catalpa, (syringaefolea)* as usual in our winters, the extremities of the branches killed, but shooting vigorously from below."

We have noticed some young trees in this neighborhood which have the ends of the tender shoots killed; older trees have not been injured.

"*Viburnum, (lantana)* suspected to be too tender for our climate. Some trees which have withstood two winters, were seriously injured by the last."

We have not noticed this tree growing in this village.

"*Helesia, (letraptera)* snow-drop or silver bell tree of the southern states, partially injured, but now in flower."

We examined one yesterday which was passing from flower; it had not been injured in the least by the winter.

"*Rose greville* withstood the winter, laid down with a slight covering of tan, and one in a sheltered situation is sending up strong shoots, though the branches were killed down nearly to the ground.

"*Champney's rose* has stood in the open ground for several winters without serious injury.

"*Camellias, viridis*, and *bohea*, (green and black tea) and several varieties of the Japonica, (Japan rose) *Peonias moutan*, var. *banksia* and *papaveracea*, have kept well in a pit eighteen inches deep, planted in the earth and covered, without artificial heat.—The Chinese varieties of herbaceous Peonias, as the double white, *Whitlei*, double crimson, *Humei*, and *fragrans*, (rose scented) are perfectly hardy in the open grounds."

The above plants have not been cultivated with us to any extent.

"*Spanish Chesnut, (castanea vesca)* has been killed by the winter to near the ground for eight years, but sends up new shoots every year."

This resists the severity of our winters perfectly, and we have seen it growing budded into the common chesnut of the woods, where it grew very luxuriantly.

"*White Mulberry, (morus alba)* has suffered in its branches more than usual by the severity of the winter, and most in a loose soil. The new broad-leaved variety lately introduced from China, seems as yet rather more sensitive to severe cold than the common white."

All the varieties seem perfectly hardy in this climate, not having been injured in the least by the past winter.

"*Weeping Willow, (salix babylonica)* has stood the severity of the past better than that of ordinary winters. Its branches have been but slightly injured."

This tree withstands the winters of Old Genesee in its branches, but some years we have noticed black spots upon the bodies of young trees which in some instances have been injurious.

"*Madeira Nut (juglans regia)* seedlings have been partially frozen down. An old tree remains uninjured."

The habits of this tree are similar to the Black Walnut, which grows spontaneous upon our river flats, but we have not seen the Madeira Nut growing with us.

"*Altheas.*—Most of the varieties have suffered by the winter."

We have not seen any injured by the winter here, unless they were moved in the fall; some double whites under those circumstances have been injured.

"*Grapes.*—Several foreign varieties left uncovered have frozen down, but are starting up again from the collar or surface of the ground."

We have a great variety of foreign Grapes growing in this neighborhood, and we do not know of but one instance where the vines were covered; and in the same garden were

some left uncovered, which have stood the winter—as have all others—as well as those which were covered.

"*Paper Mulberry, (broussonetia papyrefera)* has pretty generally suffered by the severity of our winters, and we are induced to believe cannot be successfully cultivated in our latitude.

"*Magnolia, glauca, acumenata,* and *macrophylla,* (the latter with a little tan about the bottom of the bole) have all remained uninjured. The two former believed to be sufficiently hardy."

There has been but little attention paid to cultivating the Magnolias in this quarter, yet we know that the *acumenata,* or cucumber tree, is to be found in our forests, where it is as hardy as other forest trees.

"Your valuable correspondent, Mr. THOMAS, intimates that the double flowering hawthorn is not to be found in our nurseries. We purchased one some years ago, from Mr. PARMENTIER. at the price of three dollars, which we have propagated from, and which we have no doubt is genuine—though we have not been able to keep plants enough to show flowers. Yours, &c. J. BUEL.

"*Albany Nursery, May,* 1831."

SALTPETRE ON BEEF.

One of our readers has requested us to give information in our paper, how beef can be restored which has imbibed too much saltpetre. In order to comply with his request, it will be proper to assign a reason why saltpetre is used at all, and then to counteract its effects when too much of it has been used.

It is generally supposed that saltpetre helps to preserve meat. This supposition is not correct; but, on the contrary, it has a tendency to spoil it. Salts are composed of an acid combined with an alkaline base. Common salt is muriatic acid, combined with soda. Saltpetre, or nitrate of potash, is nitric acid, or aquafortis, and potash. To form a salt, the alkali and acid combine in certain proportions. These proportions vary in different salts; in some the alkali prevails, in others, the acid. The crystalization does not take place when the two opposites exactly neutralize each other; and although they are commonly called neutral salts, they are not strictly and chemically so—for on applying tests to them, one will show that the acid, and another that the alkali prevails, or is in excess. It is found that those salts only in which the alkali prevails, will preserve meats. Common salt, or muriate of soda, is of this description; but if too much of this salt is used for salting beef or other meats which are mostly what are called lean, the meat will absorb so much of the salt as to become hard and unpleasant for use. Now the saltpetre is used to counteract this effect, for in this salt the acid is in excess; and the same effect would be produced by adding the same quantity of nitric acid or aquafortis to the brine of the meat, that there is excess contained in the quantity of saltpetre used. But this would be a plain case, and every body would say that that would sour and spoil the meat; but by adding saltpetre, the thing is so mystified that they cannot comprehend it—and the love of the marvellous, or what they cannot comprehend, is sufficient inducement with most people to warrant its use. This very relish for what they cannot comprehend, is what keeps half the quacks in our country in bread, and which gives some of them splendid fortunes into the bargain. For instance, who would purchase a bottle of Opodeldoc at the price at which it is sold, if they knew it was only bar soap dissolved in whiskey, and scented with a little ammonia or hartshorn?—and yet such is the fact:—or a bottle of *Medicamentum* at the price of one dollar, if they knew it to be similar to a compound tincture of rhubarb diluted with spirits?—or a bottle of *Panacea* at three dollars, if they knew it was only a tincture of sarsaparilla and corrosive sublimate, and that the materials might be bought for three cents. It is the love of the marvellous that makes us use saltpetre for beef, because it will do something to the beef which we cannot comprehend; for no one who tastes it will pretend that it is pleasant to the taste. We do not pretend to know why it was ever introduced for this purpose,—but it has gained such reputation, that were you to give a recipe for curing hams without it, it would scarcely be read.

But to the point:—If your beef or pork hams, or any other meats, have begun to sour by the use of too much saltpetre or any other acid, correct it by adding to the brine an alkali in sufficient quantity to neutralise the acid. Pearlash or soda, either will answer the purpose—and the quantity necessary may be known by incorporating it with the brine in small quantities, and testing it by dropping into it an infusion of Red Cabbage juice; if the juice changes to a bright red, the acid still prevails—but if it changes to green, then the alkali is in excess. It would be well if housekeepers would remember to test the brine from their meat barrels often during warm weather—and as long as the alkali is in excess, there is no danger of meat spoiling; but if the test changes quick to red, the brine should be drawn off and scalded, and a little potash or soda added—sufficient to change the test to a green—when it should be returned to the barrels. The same principle is applicable to pork or beef that has been fed on still slops. In the common process of distillation, the beer or mash runs more or less into the acetous fermentation, and the slops of course contain a quantity of vinegar. Cattle or hogs which are fattened on such food, have a quantity of the vinegar diffused through their whole system. When such meats are packed, the quantity of acid contained in them is sufficient to more than neutralise the excess of soda contained in the common salt, and the whole remains sour, ready for the commencement of the putrid fermentation, which does not take place where the fixed alkalies are in excess. For the want of this knowledge, thousands of barrels of pork are lost annually in the United States, and the blame is often attached to the manufacturers of salt, or to the superintendents of salt-making establishments, who are as innocent as were formerly those persons who were executed in New-England for witchcraft.

If to beef, hams, or fish, people would add sugar instead of saltpetre, they would find the flavor much improved, and the safety of keeping increased.

SOAP.

As this is the season of the year when most of our housekeepers attend to making soft soap for the use of the family, we trust a few observations may be acceptable.

Much difficulty is frequently experienced in this business, and many *vulgar errors* have been connected with it; and we have heard women declare that they believed their soap was *bewitched.* When the principles are once understood, the whole process is easy and simple. First, then, it is proper that housekeepers should know the properties of the component parts of soap.

There are two fixed alkalies used in soap-making, viz. potash and soda. Potash is called the vegetable, and soda the mineral alkali. Either of these alkalies will unite with grease and form soaps; potash and grease make soft soap only, but soda and grease make hard soap. Both these alkalies have a strong affinity for acids—uniting with them, and forming what is generally called neutral salts. Thus potash and nitric acid form saltpetre; soda and sulphuric acid form glauber salts, and soda and muriatic acid, or spirits of salt, form common salt.

Now no woman in her senses would think of making soap with either of these salts; and yet the base of either, when separated from the acid, would form when mixed with grease, as good soap as if they had never been united.

There is also another acid which combines with these alkalies, which will equally prevent their uniting with grease as either of the before mentioned acids—that is carbonic. Now this acid is continually floating in the atmosphere unseen, and will combine with potash or soda whenever it comes in contact, forming a carbonate of soda or potash—neither of which will unite with grease to form soap.

Much of the difficulty which housekeepers meet with in soap-making, arises from their ley having become more or less saturated with carbonic acid. Ashes which have laid long in a damp place, or become damp by any other means, will absorb carbonic acid, or if the ley is allowed to stand too long after it is leached in an open vessel, the

same thing will take place. Lime is often placed in the bottom of the leach, and but few can tell why they do it. If the question is asked, the reply is—because it makes the ley cleaner. Lime has a stronger affinity for carbonic acid than potash has, and of course will separate it from it. Common limestone is lime and carbonic acid: when limestone is burned in a kiln, the carbonic acid is separated by heat, and quicklime is formed. Now if this quick or fresh-burnt lime is placed in the bottom of the leach and the ley made to pass through it, it becomes purified from the acid, and the only thing necessary then to have it unite with grease, is to have it of sufficient strength.—This may be ascertained by its specific gravity—to learn which, put a new-laid egg into it: if the egg floats, the ley is strong enough; if it sinks, the ley must either be evaporated by boiling, or by again leaching it through ashes. The grease made use of is the refuse fat of animals, and before it is united with the ley, should be freed from all the salt by boiling it in water. The quantity necessary for a barrel of good soap is about sixteen pounds, or half a pound to a gallon.

Soap, when well made, should be thick and salve-like, capable of being spread thin upon cloth without flaking or rolling off.—If to such soap about an equal quantity of soft water is added, the soap becomes hard and liver-like, capable of being taken up in the hand. This many think is desirable,—especially the soap-boilers who make it for sale, as they make double the profit they would on the other quality.

Some housekeepers practice making their own hard soap. This is done by adding salt to the soap after it is well made, while it is yet boiling. The effect is thus explained. Salt is soda and muriatic acid. Potash has a stronger affinity for muriatic acid than soda has, and when they come in contact, as in this case, the potash decomposes the salt and combines with the muriatic acid, forming a muriate of potash—leaving the soda pure to form a hard soap with the grease:—the muriate of potash will be found on cooling, in solution at the bottom, being of greater specific gravity than the soap. The salt should be added by small quantities until the separation takes place, which may be known by the soap becoming curdled; after which it should be allowed to stand until cold, when it may be cut into bars or cakes, as suits the operator. Many suppose that resin is necessary to harden the soap. This is not the case; it is used as a matter of profit—not of necessity.

The common yellow color of soft soap is owing to the iron contained in it, as the oxide of iron is dissolved by potash. Where white soap is desirable, it may be made by substituting pearlash or carbonate of potash, and abstracting the carbonic acid by lime—and by using lard or other white grease, the purest white soap may be made.

Canal Tolls collected at Rochester.

The Canal Collector at this place has obligingly furnished us with the following facts, which we deem of importance to publish. It will be seen that the amount of cash received, from the 15th April, to the 15th of May, inclusive, is upwards of *thirteen thousand dollars* more than was received during the corresponding time, last year.

	1830	1831
Tolls rec'd from 15th to the 30th of April inclusive	$9,860 74	$17,269 83
Do. from 1st to 15 May incl	9,496 86	15,216 40
	$19,347 60	$32,486 23

This is a gratifying result of the first 30 days of business. From the 16th to the 21st, five days, there was received $6,479 89, which is fully the average of the preceding 30 days. There was received last season, $149,880 55 which was an increase of $57.362 38, over the receipts of the preceding year, at this place.

There has very little or no wheat been shipped on the canal this spring. The amount of Flour, down to the 15th instant, which has gone East, has been *sixty four thousand three hundred and seventy two barrels*. Some of this has come down the Genesee River, and some from the West, but a small quantity, however, from that quarter, at the date of our estimate (15th inst.)—as it will be recollected that Lake Erie was not navigable until the 8th; but little, if any of this amount came from Ohio.

While upon this subject, which is so interesting to our village and its tributaries, we will add some particulars respecting wheat. In the county of Monroe, last year, according to actual returns, as stated on respectable authority, there were sowed and cut 50,201 acres of wheat, which averaging 20 bushels to the acre, makes 1,004,020 bushels. This is a considerable item, and must be valued at not less than about $1,000,000, as we believe that the wheat which has been sold at this market since the 15th of August last, has bro't an average price of 100 cents per bushel.—The quantity of land sown with wheat last fall cannot, of course, be accurately ascertained, but we have conversed with intelligent Farmers who give it as their opinion, that there is one third more now growing on the ground, than was cut last year. The coolness of the spring is probably in its favor.

The last accounts from Europe, state that Flour was dull. We don't understand this. With a short crop in England; only a middling crop in the grain growing countries of Europe; and the probability too, of Europe in arms, the present summer, what should so depress the market, is beyond our comprehension. If we should ascribe this depression to the giant operations of speculators, perhaps we should invade their province, which would be highly presumptuous. A few days must end this suspense, which, to the non-initiated wheat and flour holders must be painful. A part of the wheat bought here was purchased on contract.

Notwithstanding such large sums have been heretofore invested in mills on the Genesee river at this place and vicinity, still another handsome mill is now building, situate but a few rods below the large mill of E. S. Beach & Co., calculated for six run of stones, which will be in operation this summer; near this is a Grist mill erecting calculated for two run. These mills are building, the lasgest by Mr. E. D. Smith, and the other by Messrs. Shelmire & Bemish, of this place.

TULIPS.

The Examining Committee of the Monroe Horticultural Society acknowledge the receipt of a beautiful assortment of Tulips, from the garden of Messrs. Howard & Parsons, of Lyons. They are placed in the Arcade, for the inspection of Florists. As they were not labelled, the Committee cannot mention the different ones by name, but can say that they surpass any that have been presented to the Society this season.

J. L. D. Mathies,
May 23d, 1831. Chairman of the Committee.

FLORAL CALENDAR.

May 15— Tulips, (*Tulipa suaveolens*) Shadflower, (*Aronia botrijapium*) Crowfoot, (*Geranium maculatum*) in flower.

25 Dogwood, (*Cornus florida*) Lilacs, both white and purple, Mountain Ash, (*Sorbus Americana*) Quince, (*Pyrus cidonia*) in flower.

The weather has been unusually wet and cold for the week past, consequently the farmers are backward in their spring work; many have not yet planted their Indian Corn.

Note. Owing to some oversight, the Floral Calendar has been omitted for several weeks. We hope to be more careful in future.

ALBANY HORTICULTURAL SOCIETY.

Third exhibition of the Society, May 17, 1831.

A fine large boquet of flowers, consisting of double flowering cherry, Japan apple, peach and almond, snow-flake jonquils, double tulips, spina futrix, purple and white lilacs—from the garden of D. B. Slingerland.

2 fine bunches radishes, 12 stalks rhubarb—from the garden of S. Van Rensselaer, sen.

1 fine bunch Sir John Sinclair beet, 1 fine bunch sea kale, 20 inches in length, 12 stalks rhubarb, 2 stalks polianthus of 50 and 68 flowers—from the garden of Geo. Wilcox.

A fine collection of flowers, consisting of double narcissus, almond, cherry and jacobia; 2 varieties of single narcissus, four varieties of lilac, Silician, Chinese, purple and white; double tulips of different colors; bizarn and bibloim tulips, of every variety of color, from the 'mountain of snow to the rose Rebecca'—from the garden of Jesse Buel.

2 bunches radishes, 12 stalks rhubarb—from the garden of Spencer Stafford.

1 bunch beets, 1 bunch carrots, both raised in open ground by James Wilson.

3 splendid seedling heaths, rose colored and white—from the Albany Nursery.

Stated premiums were awarded to S. Van Rensselaer, sen., George Wilcox, and Jesse Buel.

Discretionary premium for beta Sir John Sinclair and crambe maritima, to George Wilcox.—*Alb. Argus.*

LE RAY DE CHAUMONT'S ADDRESS.

Concluded from page 155.

The operations of the farmer would be much facilitated, if he could foresee with some tolerable degree of certainty the approaching changes of the weather. Hence have arisen, as men are apt to answer their wants by fictitious means, when they cannot do it by real ones, some of those prognostics which we find disseminated in all countries and in all ages, which are still believed in, like the predictions of card-tellers, or the explanations of dream interpreters, though they have disappointed a thousand times.—There is an instrument, the immediate object of which does not appear, at first view, to promise the results which have been found to be drawn from it. The barometer measures the relative weight of the atmosphere, by means of a column of mercury or quicksilver which rises in a glass tube, deprived of air, when the atmospheric air becomes heavier; and lower when the air is lighter. It has been remarked that the first effect is generally followed by good weather, and the latter by bad, in a greater or lesser degree, according to the rise or fall of the mercury, and other circumstances which the habit of consulting the instrument will soon teach to distinguish. Along the sea coast, and on the ocean, this effect of the mercury is more generally indicative of the force of the wind, and hence this instrument has now become a necessary appendage to a well appointed ship; but in the interior the indications of the barometer, although they also are influenced by the winds, are more particularly in reference to rain. We have made use of this instrument at Le Raysville for some years, and have acquired the habit and the confidence of being guided by it whenever the coming state of the weather becomes a matter of interest, and we now are like most of those who have been in the same practice, at a loss when we are deprived of our counsellor. I have no doubt that a good farmer who would pay ten or twelve dollars for such an instrument, would find that he could not well have applied the same sum to a better purpose. Were six barometers ordered at once, they might be had in New-York for five or six dollars.

Another means of attaining useful knowledge I would mention, is the subscribing to some periodical publication principally devoted to agriculture. There are two which, from their location and the manner in which they are conducted, I would highly recommend. One is the New-York Farmer, published monthly in the city of New-York, at three dollars; the other the New-England Farmer, a weekly paper of Boston, at two dollars fifty cents per annum. The New-England Farmer is taken by two of our most enlightened members, who have the highest opinion of its merits and usefulness. Some numbers of those papers will be distributed with a part of the premiums. In taking a paper devoted to agriculture, it might be an economical and otherwise advantageous way to unite several in a close neighborhood, and meet weekly on some evening to read the paper. Each would make his remarks, and bring his stock of knowledge and experience. The young part of the families would be instructed. The habit of observation, of investigation, the social feelings which such meetings would foster, would, it seems to me, produce very great benefits.

The New-York Farmer is under the patronage of the horticultural society of that city, but both papers devote a large space to gardening; and it would perhaps not be among the least beneficial results this would produce, if they should improve so useful and important a part of a good farm. It is well to raise the best provender for our cattle, and adopt new species when they are well recommended; but I think we ought to take as good care of ourselves.

A well cultivated garden on a farm bespeaks more than any thing else, order and comfort, and has this peculiar merit, that it is an outward testimony in praise of the female part of the family, whose care is necessary to its success.*

We derive most of our population from a part of the country where more regard is paid to this branch, and where new and increasing emulation is excited by their flourishing horticultural societies. We are yet too young here for such an institution; but our society may very properly and usefully at present extend its care and encouragement over our gardens. It has been a subject of remark with the traveller, and of regret in the new comer, that so fine a country having made such astonishing progress in every thing else, should be comparatively backward as to gardens. It has been observed to you on a former occasion by one well qualified to speak on that subject, that in no country are the vegetables better than in this, nor are our fruits inferior to any, so far as we have tried them. You will conduce to your health and comfort by attending to this subject. Some vegetables of early and profitable cultivation, which you will find noticed in the papers above mentioned, are generally unknown here, and would be valuable acquisitions; and as to fruits, the example of some of our best farmers is not sufficiently followed, and it would seem as if the generality were satisfied with such productions as our forests contain, with the addition sometimes of seedling apples. We are too far advanced to remain longer in this unfarmerlike state, and it is time we should render ourselves worthy of the country where it is our good fortune to be placed.

The society has heretofore taken the subject of roads into consideration, and justly so. Not only do they form an important part of the yearly labor of every farmer, but the subject is not so generally understood, if we judge from practice, as it ought to be. I cannot, of course, enter into a detailed examination at present; but I am glad of an opportunity, at this yet early part of our settlement, to bring the public attention to the mode of laying out roads. Following the straight line is a very good rule of our moral code, but it does not apply to the making of roads; as it is not always true in finance that two and two make four, so the straight line is not always in fact the shortest distance between two points. We see every where in this country the roads going up and down the steepest hills, when they might have been avoided with the greatest facility. One single hill in a road to be travelled will generally determine the load we can take, and the time spent in going up a steep hill of twenty rods, the expense which may result from accidents, besides other serious consequences, will often compensate for going a great distance round. A level road is of the utmost importance to the farmers who have to carry their produce to market, and when we shall become fully sensible of it, we may be put to a great expense and trouble in going through improved farms, &c. to level our roads. In parts of the United States, where science and experience are combined in establishing roads, the angle the road is to make with the horizon is determined and adhered to. The very backbone of this continent has been passed at such an angle as would hardly seem to us, in this even country, to form an ascent. There is no reason why we should remain behind our age on this subject.

The thistle, for which it is supposed we are indebted to our northern neighbors, has often been attacked in this place, and to all appearance with such little success, that it requires some degree of fortitude to renew the battle. Yet it is one of so much moment that we ought not to feel discouraged at every successive attempt which may fail. It is an undertaking which can succeed only by general co-operation. I am convinced from what I have seen and heard, that with united and proper efforts, this increasing evil may be completely overcome, and with much less labor and in less time than is generally believed. Cutting when the stem is hollow, and chiefly before a rain, is effectual. Throwing upon the stumps the salt you want to feed to your cattle, has been known to succeed, and a due cultivation with Indian corn, wheat and clover, it is asserted, will completely subdue them in all cases. But a farmer must not feel secure because he is exempt from them, or even his neighborhood. The seeds are wafted by the wind to a great distance, and one field only, one single small spot of ground, which from some cause may be given up to the encroaching stranger, may poison a whole plantation. Some parts of the ground are now so impregnated with the seed, even at a distance from clearings, that if the smallest opening is made in the woods, it will take possession. There is one way in which one single man, in every road district, who would be determined not to give up till he had conquered, might do much to effect the desired object. By the statute on highways, it is enacted that "it shall be the duty of the overseers to cause the noxious weeds on each side of the highway within their respective districts, to be cut down or destroyed twice in each year, once before the first day of July, and again before the first day of September, and the requisite labour shall be considered highway work." A neglect of such a duty can arise generally but from ignorance of the obligation, or from carelessness. The first is easily removed by any inhabitant who choses to be free from weeds; and the second might be cured by being reminded that a penalty of ten dollars is attached to a neglect of the duty. The example thus set would be followed by farmers along the road, and by perseverance, the happy result may be expected.

The use of plaster in quickening the growth of grasses will be very useful, and you will therefore find it important to choose the Pennsylvania clover, and the lucerne, which are cut twice, or oftener. This season has been favorable to weeds. It therefore behoves us to be prepared with all our means to meet them the next year.

* I take the liberty of requesting, for the benefit of our next cattle show, all those who have any fine fruit, and particularly that which is rare, to send a sample of it to our society for exhibition on that day.

I will say a few words upon a topic which has heretofore been mentioned in this place, and those only because my particular business makes the remark more than disinterested on my part. The best of our farmers are united in saying, that we cultivate, or rather attempt to cultivate, too much land. I believe the principle will not be contested by any who would be likely to be affected by it, and I insert it here only with a wish to impress it again upon your mind.

Travelling a few years ago in Pennsylvania, I saw in a grist mill a machine to break corn before shelling; in that state it was ground coarse, and fed to hogs and other animals. I heard much of the advantage of this plan, but being unfortunately prevented from devoting as much of my time and of my thoughts to the subject of farming as I wish, I might never have endeavored to introduce this mode in our county, if the too great partiality of my associates had not chosen me for the honor of addressing you on this occasion. In the limited opportunity I have had of enquiring about it since, I find that the same process is followed in several parts, at least, of the country, and very well spoken of. It is thought by some that it saves a quarter of the corn in fattening swine. A paper of a recent date from Columbia, (Pennsylvania) says, that it has been pretty accurately ascertained, that thirteen bushels of Indian corn ground up, corn and cobs together, afford, at least, as much nutriment in feeding cattle, as nine bushels of corn without the cobs. Here is a saving of nearly one third. This food is used by the carters in New-York for their horses.—A machine to break the corn costs about fifty dollars. I have no doubt if some of our enterprising millers should establish such a machine, he would have the double reward of bringing grist to his mill, and doing good to his country.

The introduction of lucerne into this country has heretofore been recommended to you, but the difficulty of procuring the seed, and the want of a sample, have probably been impediments to its extension. I am going to procure some seed for my use, and will cheerfully get some for those who will leave their names to-day with Mr. Hungerford.—This grass is strongly recommended by some of our most able agriculturists, as Mr. Lowell, President of the Essex Agricultural Society in Massachusetts, and Mr. Buel of Albany. I have the more confidence in the opinion of its advocates, as I find that many of them, and the latter in particular, failed in the beginning of its cultivation. Its great advantages are: its durability; it will last ten years or more in good ground; it is earlier than clover; is mowed three or four times in the season; stands droughts and hard winters better; and its root going six feet and more into the ground, draws sustenance from a part of your land which otherwise is beyond your reach. Mr. Buel, and others, say, that being cut and fed green, it will keep five or six cows per acre during the season. Less oats is necessary with it than with clover. In short, it is so highly spoken of both in Europe and in this country, that no good farmer who has soil adapted to it, which is a deep sandy loam, should be without a field of it, even if it is but one acre. You will perceive, that once well put in, it will cost nothing more for several years, and produce yearly a greater profit than any other grass. Those who wish to keep their lands in grass as long as possible, can have nothing to compare with it. I have good authority for saying so, and only wish that the limits of this address would admit of my quoting some of them.

The inhabitants of this county have had lately an occasion of displaying their taste for scientific and useful pursuits. Mr. Finch, a distinguished mineralogist, was attracted by a subscription to deliver a course of lectures at Watertown, in the intervals between which he visited several parts of this county, and on his last evening gave a summary account of what he had seen, the substance of which will be published. Besides the objects of curiosity for the intelligent and inquiring traveller which he mentioned, and which are not immediately connected with our present purpose, it was gratifying to hear this gentleman who has travelled over a great part of the United States, and whose business makes him a close observer of the soils of a country, express himself in so favorable terms upon our part of the state. A very important conclusion may be drawn from his observations upon the part of our country which rests upon limestone. It is objected by some of the people residing in that part, when they are advised to burn some of the stones which they find upon their farms, and spread the dust upon their land, that as the country lies upon a lime rock, the soil must contain lime. Mr. Finch has said to you, that the conclusion is by no means certain upon general principles. It is undoubtedly false as it regards a pretty large tract of land; viz. the far greater proportion of the pine forest. As to the rest, Mr. Finch had not the means of making the nice experiments which are necessary to determine the exact quantity of lime contained in a soil; but he tried some earth picked up on the side of the street leading to the arsenal, and found it to contain very little lime. Some clay taken near the Universalist Church, and chosen as one of the grounds most likely to contain a great deal of lime, showed the indication of very little; in the opinion of Mr. Finch, not over five per cent. The quantity which our soils contain is probably so small, that there can be no doubt of its being greatly improved by the introduction of lime. I find in Chaptal's Chemistry applied to Agriculture, that Mr. Tillet made at Paris a great number of experiments upon the best proportions in which sand, clay, and lime could be mixed to produce the most fertile soil,these three ingredients forming generally the best soils, with the addition sometimes of vegetable matter, which is very desirable, and also of other substances, which are not generally in such proportions as to affect sensibly its bearing qualities. He found that the best mixture was twenty-five per cent. of sand, thirty-seven and a half of clay, and thirty-seven and a half of lime. This agrees in a striking manner with the analysis as made by Bergmann of one of the best soils of Sweden, containing thirty sand, forty clay, and thirty lime, and with that of an excellent alluvial soil on the borders of the Loire, made by Chaptal, but which he gives in a way which cannot be exactly compared with the foregoing without entering into too much detail. A piece of land in Touraine, which had just produced a fine crop of hemp, gave half sand and one quarter of each of the other ingredients.

It may therefore be concluded that the most advantageous proportions in which sand, clay, and lime may enter into the composition of earths, are from one quarter to one half, although an excellent wheat land in Middlesex, England, was found by Davy to contain only one tenth of lime. Any farmer may find pretty nearly what proportion of lime his land contains by mixing limestone, finely powdered, in different proportions with dry sand and clay, (weighing each material)—by pouring a few drops of muriatic acid, which may be had at the druggists, on this mixture diluted in water, an effervescence will take place more or less strong in proportion to the quantity of lime; and by comparing it with that which takes place in pouring the same acid upon his soil, he will have a tolerable idea of the quantity of lime which it contains, bearing in mind that our limestone has about four tenths lime. But where a very great deficiency exists, if it could be corrected only by mixing a due proportion of lime, the evil would be practically irremediable. To make a soil containing thirty per cent. lime to the depth of six inches, five thousand bushels per acre would be required. But it has been found, that lime obtained by burning limestone, operates upon soils in the double capacity of a stimulant and of a component part of the soil. On this account forty or fifty bushels per acre are sufficient to produce a good effect, although several hundred bushels, and in one instance one thousand, have been used to advantage in Great Britain. Mr. Finch recommends, with reason, its use in this county, and quotes as examples the great benefits derived from it in Pennsylvania and in Jersey, and in one instance at Brownville. There is no doubt that in some soils the effect is astonishing—Lime may also be added to land by using plaster. This is much cheaper, but will not have so lasting an effect. Which of the two will be preferable here will be determined by experience, and trials should be made on both, so as to enable us to choose between them.

And here I would beg leave to suggest a plan which I think would do more good than can be done in any other way with any thing like the same trouble. Pattern farms have been established in other places, but they are extremely difficult to be well managed any where, and would be almost impracticable here at present. I would therefore spread the pattern farm all over the county. Let every man who tries an improvement on his farm, when it shall be on the road, (which he should try to do) put up a notice written with chalk on a piece of board, stating in a few words the nature of the experiment. In the case before us, for instance, let a few narrow strips running back from the road be left without liming, on average quality and situation. Write on a piece of board or shingle posted up, "thirty bushels stone lime per acre;" the strips left without liming will speak for themselves, and you will persuade more to follow your example than the recommendation of the greatest orators could do.

The roller, which is considered in France and in England, as one of the most important implements of modern husbandry, is not yet adopted in this county; but ought certainly to be, after the high encomiums which are bestowed upon it by some of the best farmers in the eastern states, who have experienced the greatest benefits from its use. Repeated experiments made on the farm at

Le Raysville, prompt me to recommend it with an entire confidence. It can all be made by the hand of the farmer, and comes to him so cheap, that the benefit he may reap from its use will repay him the very first year. It is not only advantageous to grain crops, but very much also for grass. One hour's work with the roller after plowing and harrowing, says a farmer after eight years experience, will do more in pulverising the soil, and in producing a finer tilth, than ten times the amount of labor with plow or harrow. A smooth round log, eighteen inches or two feet in diameter, but the larger the better, and five or six feet long, will answer a very good purpose for a roller.—Add if you please, a box to carry the stones out of the field, or to augment the weight at pleasure, and a scraper to prevent the earth clogging your machine.

It is a gratifying task for me to have to felicitate you upon the means we have of improving our already good stock of neat cattle. We have in this county two bulls of Devonshire and Hertfordshire; and through the enterprise of Mr. Budd of Carthage, we now own a very fine full-blooded bull, of that most valuable breed, the Durham short horn. It was bred by the celebrated Mr. Powell of Philadelphia.

The growth of wool is not a favored one with our farmers,but the prospects are brightening, and a better market will reward our exertions. The subject, however, to which I would direct your most serious attention, is the employment of that material in the family manufactures. It is said by some, that they can buy imported cloth cheaper than they can make it. I believe the report of your viewing committee will bear out the contrary opinion; but even if there was a little difference, is there not a great advantage in answering yourself your own wants, rather than pay money or the equivalent of it? Do you not feel a pride and a satisfaction in wearing *homespun?* But above all, will not your good housewives enter into those feelings, and seize an opportunity of rendering useful the industry of their daughters? The mention of this *better* as well as *fairer* portion of the human race, reminds me that our assembly is graced as usual by their presence, in a number which is a reward and an encouragement for our labors, and that their flattering attention should not be fatigued. Their usual influence will also move us to raise our eyes from earth to heaven, and to ask a continuance of those great privileges and blessings with which it has pleased the Almighty to favor us.

From the Lansingburgh Gazette.

FLOWERS.

Mr. Editor—You will much please me by giving the following extract of a communication from H. A. S. Dearborn, which appeared in the New-England Farmer, Feb. 1830, a place in your paper.

A Subscriber.

"In all ages and countries, flowers have been universally cherished and admired as the ornaments and the delight of the vegetable, as are their prototypes, of all the animal kingdom. The fondest titles, the most ardent expressions of attachment, and the lovely qualities of each, have been reciprocally bestowed upon the pre-eminent of both realms. The Rose of Sharon, the Violet, and the Lily of the Valley, have become the consecrated emblems of female excellence; while the refined and endearing attributes of woman, furnish the names, or give distinction, to those interesting favorites who throng the brilliant court of Flora.

"We may ask in the eloquent language of the enthusiastic Boursault—'Who does not love flowers?—They embellish our gardens; they give a more brilliant lustre to our festivals; they are the interpreters of our affections for our relatives and friends; they are the testimonials of our gratitude; we present them to those to whom we are under obligations; they are often necessary to the pomp of our religious ceremonies, and they serve to associate and mingle their perfumes with the purity of our prayers, and the homage which we address to the Almighty.—Happy are those who love them and cultivate them.'

"The ancients paid particular attention to the culture of flowers. They were in great request at the entertainments of the wealthy, for adorning the apartments, as well as the participants of the feast; they were scattered before the triumphal chariots of victorious generals; they were placed upon the tombs of the illustrious and beloved, to perpetuate the pleasing, yet mournful reminiscences of their virtues; they formed the distinguishing insignia of many of the divinities of mythology; they glitter as genius in the diadems of the seasons, and constitute the mystical language of poetry.

"We are informed that Descartes prosecuted, with equal ardor, astronomy and the culture of flowers, and often retired from his celestial observations to study the sleep and floration of his plants, before the rising of the sun. The great Conde, returning from the dangers and glories of the battle-field, devoted his leisure hours to the cultivation of his flower garden; and so enamored was Lord Bacon with these silent, yet eloquent and soothing companions, that the vase of flowers was daily renewed upon his table, while composing the volume of his sublime philosophy."

From the New-England Farmer.

WINTER BUTTER, SHORT HORN CATTLE, &c.

Mr. Editor—Much has been said in the New-England Farmer about *freezing* the milk to obtain cream for butter. My objections to this practice are, the butter so made is inclining to be *white, will not sell well*, and is *crumbly* and *will not cut handsomely*.—Besides, I think the flavor hardly equal to that made in the method we have pursued.

Our object has been to keep the milk in a temperature always *above* the freezing point—say not lower than 40 or 45 degrees.

The method which we have practised, and which I think best for winter, was recommended to me by that great friend to agricultural improvement, Charles Vaughan, Esq. as followed in the counties of Somerset and Devon, England. The milk, immediately after it is taken from the cow, is put in a copper or brass vessel, of a size according to the quantity of the milk, care being taken that it is not more than eight or ten inches in depth, and gradually brought to within two or three degrees of boiling heat, when it is permitted slowly to cool. In the course of five or six hours, the most of the cream rises in a beautiful thick sheet, and is so solid that it may be cut with a knife in almost any form. It comes to butter almost immediately, *never* requiring more than five minutes churning. The butter is of fine quality, being of good color and flavor.—The practice also saves labor and *cold fingers*. We have in this way had no butter that was not as high colored as what I send you. But perhaps the high color may be owing considerably to the extra richness of the milk, and this quality of the milk is wholly attributable to the cows. My stock consists of the *Short Horn* breed in the blood of *Cælebs*, *Denton*, and *Holderness*, the *Herefordshire* in the blood of Sir Isaac, the *Bakewell*, and that excellent, though undefined breed introduced here from England by Charles Vaughan, Esq. and the best *selected native*.

I am aware that much contrariety of opinion exists as to the properties and relative value of the different breeds of cattle, and my intentions have been, and still are, to go through with a series of *fair experiments* on the subject.

So far as several years' observation and one year's *experience* will enable me to judge, I am inclined to think the improved imported races (the short horns, particularly,) the most *profitable*,—that is, taking them for all purposes. I do not know that they will give any more milk than the 'natives,' but it is, I believe, generally of a *better quality*, and they certainly keep in *much* better order on the same food. They are also *put together* more on mechanical principles, are *stronger*, and have better *constitutions*. I would recommend to every farmer to give them a fair trial.

Sanford Howard.

Hallowell, April 18, 1831.

TULIPS.

Now that we are beginning to feel a little of the 'etherial mildness' of spring, we may perhaps turn our thoughts for a moment to the subject of flowers. The weather has been so cold for five weeks past, with the exception of two or three days of the present, as greatly to retard vegetation of every description. The trees have not yet entirely assumed the appropriate livery of the season, and flowers have hitherto refused to distil their odours. A refreshing change, however, is now discoverable in the fragrance of the suburban atmosphere, and our fair friends can at length venture forth to enjoy the sylvan scenery of the neighborhood, with the assurance of regaling themselves upon sweets of other leaves and flowers than ice-plants and snow-drops.

Of the early history of the Tulip, from its discovery among the Turks, to the extravagant speculations in the roots, as articles of merchandise, in various countries, but particularly in Holland and England, about a century and a half ago, our readers are probably as well acquainted as ourselves. Mr. Neale, however, has put into our hands a leaf from a very old Magazine, from which we quote the following paragraphs "on the fondness of the Turks for the Tulip," from the *Opuscoli of the Abbe Sestini*, which will probably amuse, if it does not instruct, the reader.

The Tulip, called in the Turkish language Lale, is a flower which these people were so passionately fond of, that they employed the utmost care to bring the cultivation of it to perfection. They did not set much value on those, the bulbs of which were brought from Holland, because it is an established rule among them, to esteem more whatever grows in their own country, than the productions of foreign nations.

Tulips, however, have been in so great

request, and so much sought after at Constantinople, that several Sultans have ordered roots to be brought them from all countries, in order that they might have every possible variety of these flowers. To these varieties they even gave Turkish names, which had some relation to those of the first offices in the Ottoman empire; and they commanded that a catalogue should be made out in the Turkish language, of all the different species.

Under the Sultan Achmet III. who was passionately fond of this flower, all the nobility of his court applied themselves to the cultivation of it, with the greatest care, and to procure uncommon kinds, with the newest and most beautiful varieties.

These nobles presented their tulips to the Sultan, on a certain day of the year; and this ceremony, which was extremely splendid and magnificent, was called *viafet-lalesi*, that is to say, the festival of tulips.

The Grand Vizier, Ibrahim Baschia, was also remarkably fond of tulips. As he had never seen any *blue* ones, he took it into his head that he could, by the assistance of art, procure flowers of that color. He therefore consulted on this subject different Turkish chemists, who all agreed, that to have blue tulips, nothing more could be necessary, but to put into the bulbs the flowers of the *syringa særulea*. The experiment was tried, but, as may well be supposed, was not attended with success.

The Turkish nobility derived afterwards another pleasure from these tulips. They waited for the moment when they were in full bloom in their gardens, and intermixed them with small lighted lamps and cages, in which they enclosed nightingales taught to sing; thus endeavoring to gratify both the senses of seing and hearing. This festival was called *cieragan*, that is to say, the illumination.

This reigning passion for tulips continued in Turkey under the Sultan Mahmud, and the Sultan Mustapha; but after the death of these emperors, it gradually decreased. The Turks at present do not entertain an exclusive passion for tulips, and they set almost the same value on them as we do.—*N. Y. Com. Adv.*

Agricultural Education.—We have frequently spoken in terms of approbation of the Fellenburg system of Education, and wished that our country might be so fortunate as to have it introduced here; but we had no expectation of our hopes being so soon realized. It is with the most heartfelt pleasure therefore, that we lay before our readers the following proposals for such a school. We have had a short personal acquaintance with Mr. Ismar, and he has communicated to us his views in detail; we have besides made ourselves acquainted with the system of education he proposes to establish, as set forth in his lectures published in the two last numbers of the Farmer, and the "outlines," published in the present number; from all which we have derived impressions highly favorable to Mr. Ismar and the school. We believe such a school to be exactly the thing wanted in this country, to lay the foundation of a system of improved agriculture. We believe further, that, if generally adopted, it would contribute more to the happiness of mankind, and especially to the well being of the people of this country, than any other system or combination of systems yet known. It is besides a cheap school—little more than is required in large towns for mere tuition. We therefore recommend it to the serious attention of readers of the Farmer. As Mr. Ismar has made us the the repository of the details of his views, we shall take pleasure in communicating any information we may possess to those who may require it.

MR. SMITH; *Bolton Farm, April* 25, 1831.

Dear Sir.—You will be informed by Mr. Ismar's private letter of this date, what are his views relative to the Union of Agricultural and Intellectual Education at Bolton, and also of his intention to communicate for the Farmer, the results of his observations, which I am sure you will find interesting. You will now have the goodness to insert in it the following. I am, most respectfully, your ob't servant.

ANTHONY MORRIS.

Association of the Fellenberg System of Education, under the superintendence of F. A. Ismar, late of Hofwyl, with the classical and English institution of the Rev WM. CHADERTON, *on Bolton Farm, near Bristol, Bucks county, Pennsylvania.*

The object of this association is to establish a school in which classical lesrning will be omitted, for boys between the ages of ten and twenty years, to be instructed in theoretical and practical agriculture, the sciences connected with it, and the machine arts; and also a school for the preparation of teachers who may extend the system throughout the country. This department, which is now open, is under the exclusive superintendence of Mr. Ismar; and to adapt it to the agricultural and mechanical classes of society, the charge for tuition, board, and washing, will be $100 per annum, payable half yearly in advance, half in cash, and half in produce, at the market price. F. A. ISMAR.

SILK WORMS—CHLORIDE OF LIME.

The season for raising silk worms having arrived, it is suggested that persons engaged in it provide themselves with the chloride of lime as a preventive of disease among the worms. The Editor of the American Farmer has no hesitation in saying, that, when properly and timely applied, and attention to cleanliness is observed, it affords perfect security against the only disease to which silk worms are extensively liable in this country, to wit, the *Tripes*. From the time he first made the discovery, two years ago, he has never known an instance of its failure as a preventive, and he has known it to arrest the disease after it had become epidemic, and when the destruction of the whole establishment seemed inevitable. The discovery of such a remedy has been considered an object of the highest importance in the silk countries of Europe, and occupied the anxious attention of their scientific men for ages;* and it has been reserved for America, in the very infancy of her silk culture, to make it. The chloride of lime is a very cheap article,—a dollar's worth being sufficient for a pretty large establishment—and it is easily applied. An ounce or two of the powder may be put in a plate with a little water, several of which may be set about the room, and replenished every four or five days; or it may be put in a jug or demijohn, and a gallon of water added for every pound, and a little of the solution sprinkled over the floor two or three times a day, whenever there is any offensive smell in the room. In hot weather, when it would be unsafe to cool the room by sprinkling water on the floor, (in consequence of the vapour evolved) it will be of the greatest advantage to have this solution of chloride of lime, as that may be used not only with impunity but very beneficially, both for cooling the room and sweetening the air, as well as for the prevention of disease. The time will come when chloride of lime will be considered an essential material in every silk labratory.—*Am. Farmer.*

* This discovery was considered so important in France, that it was made the subject of an elaborate paper read before a scientific society in Paris, though its American origin was forgotten.

FROST.—We had a very severe frost on the nights of the 9th and 10th inst., which it is feared has destroyed much fruit and early vegetables. In the editor's garden, the melon and cucumber vines were partially injured, notwithstanding they were in a very favorable situation, having the advantage of a high hill on the north. The sweet potato vines, in the same situation, were also injured. The egg-plants and tomatoes, the former in an exposed situation, were untouched. The nursery of young *morus multicaulis* received partial injury, by the destruction of a few of their leaves, some of which were five inches in diameter. The white Italian mulberry escaped without any apparent hurt. The peas, beans, corn, and other vegetables, do not appear to have suffered. But the most important fact established by the occurrence of this frost, is that of the hardiness of the *Aracacha*. Seventy-five plants of this vegetable were on the north side of a board fence, with a full northern exposure, and have not suffered in the least by the frost, while some cucumber vines near them were cut off. We hear that in the country extensive injury has been done to the fruit and vegetables.

THE WHEAT CROP.—A gentleman in Jefferson county, Va. in a letter to the editor, dated May 10, says, "The wheat is, I fear, snffering excessively from the ravages of the 'Fly,' and the unpropitious season."—*ib.*

METEOROLOGICAL TABLE,
for the week ending May 21, 1831.

Days	Time	Ther	Barometer	Wind	Face of the Sky.	Observations
15	M	74	29,77	s e	fair	
	E	65	29,68	s e	do	
16	M	78	29,65	s	fair	
	E	64	29,60	s w	do	showers
17	M	74	29,65	w	fair	
	E	56	29,62	s w	do	
18	M	62	29,60	e	fair	
	E	55	29,65	s w	do	4-10
19	M	72	29,42	s e	rain	small showers
	E	64	29,27	s	do	
20	M	63	29,30	w	rain	3-10
	E	56	29,40	w	do	2-10
21	M	65	29,35	w	cloudy	
	E	50	29,45	w	fair	1-10 rain showers

☞ *The Barometrical and Thermometrical observations are registered at* 10 *o'clock A. M. and P. M., which by a long series of experiments made for the purpose, show that time to give a nearer mean average of the relative heat of a day than any other time.*

NOTES ON MICHIGAN.

(Concluded from page 159.)

In ornithology, the species, whether of the air, or on the water, are rich and varied. The winter in the region about Lake Superior, is stern indeed; the thermometer being often at the freezing point of mercury (38)—and nearly all the winter below zero. During winter, the white Partrige, the great White Owl, and the Canada Jay, are driven from the region round Hudson's Bay to the Lakes. All these birds have feathers on their legs. The Wild Turkey inhabits the southern part of Michigan. There are several kinds of duck; one species fly into the rapids near the upper end, and sail down the waves to the lower end of the rapids,and from thence return to the place from whence they started, and sail down as before. In 1814, a small bird of peculiarly beautiful plumage, appeared, singing at evening, which was named the Grossbeak. When it is recollected, that Lake Huron contains more than a thousand islands, and Lake Superior one as large as the state of Connecticut, —and 1500 miles of uninhabited borders; these island forests and forests on the shore, must contain species of hardy birds and other fowl not yet known or attempted by any ornithologist.

"Ichthyology has scarcely extended its researches into this quarter. Yet it must be evident, upon a slight examination, that the northern waters present an interesting theatre of observation. The great chain of lakes, stretching across sixteen degrees of longitude, and embracing fourteen degrees of latitude, present in themselves,an area, compared to which, the lakes of the old world are diminutive. But it is an area which nearly excludes those fishes who thrive best in warm and turbid waters, or attain their least perfection in those that are cold and transparent. And we attach more importance, in the distribution of species by nature, to these principles, than to any physical impossibility of communication between the lakes and south-western rivers. Some inquirers, more curious, perhaps, than wise, have attempted, partially, a new distribution, but without the sligthest evidences of success. The eel has, for instance, been taken from the foot of Niagara Falls to the river above, and in a manner, apparently, to ensure success to the experiment; yet nobody has observed that eels have become products of the lake waters; although such streams as the Tonawanta and Maumee, would seem to be favorable to their reproduction. And were there not something ungenial in the waters themselves, it appears difficult to conclude that such experiments would not meet with success.—We have it on good authority, that eels have been occasionally taken in Chicago creek, an inlet of Lake Michigan, but they have not been found in Lake Michigan itself. Lamprey eels exist in the lakes. And we have observed the gar, a species of the Amia, (Shig-wum-aig) heretofore found only in the rivers of Georgia. Both these varieties have been noticed in those expansions of the channel denominated *lakes*, in the straits of St. Mary.

"But the most important of our lake fishes, considered in reference to its value in commerce, is the white fish. This is found to inhabit the lake waters, in the whole extent of the series, at least above Niagara Falls. It is more particularly taken in the straits of St. Clair, and in those of St. Mary's and Michilimackinac. And the quantity put up, during the last season,(1830) has been estimated at 8,000 barrels, valued at $40,000. It is not only found in our Mediterranean lakes, but also, in the small lakes situated at the sources of the Mississippi, which have their outlets into that stream. It is thus diffused over the northern hemisphere, at least from the latitude of Peca-ga-mah, the uppermost falls of the Mississippi, to the head waters of the St. Croix and Chippewa rivers. But it has not been known to descend those rivers into the Mississippi; nor has an individual of the species been observed in the Mississippi, even where its waters are the clearest. No physical obstruction exists for their passage out of these tributary streams; and it is difficulty conceive any reason for this exclusive occupation of these upper waters, without referring to a law of nature, which has adapted their habits, both of migration and subsistence, particularly to these small lake waters. And it appears manifest, that with respect to these Missisippian lakes, the range of their migration must be very limited, and their winter abode confined."

We feel a strong interest in the growth and prosperity of Michigan; inasmuch as it will be virtually only an extension of our own state. Michigan is settled principally with New Englanders and New Yorkers. The spirit of her laws will be like ours; and every surplus article of produce from her fertile fields, will pay a slight tax to our canals.

There are large tracts of Michigan lands, now about to be sold by the Government; and from their excellent quality and cheap rates, they are certainly tempting to the Yankees, even to those who are only possessed of a small sum of money. With a daily line of steam boats from Buffalo to Detroit, the two places are brought within a little more than a day's journey of each other. It is true, the population of Michigan is not as great as we anticipated; this, however, admits of explanation. In all new countries, the population is unsettled—constantly moving. The census was began in June last: then, perhaps, five thousand individuals were actually locating their lands; in the fall they moved on,—and their families will generally average from five to ten. We have no doubt, but that Michigan contains at this moment population sufficient for a state, were a census faithfully taken

The attaction to Michigan is on account of the goodness and cheapness of the soil; and, although they may not have a ready foreign market, yet while the territory is filling up, a home market is produced in every settlement

In expressing our friendship for this new and promising country, we bespeak emigrants to give a passing notice to western New York The unsold lands in the state west of Seneca Lake, belonging to various companies and to individual land holders, has been estimated at one million acres; now, supposing one third of it to be at present unsaleable, there will remain between six and seven hundred thousand acres,which will support a great emigrant population. These lands can be obtained at from 3 to $5 per acre; and where is a more desirable location for a market? In the district of which we are now speaking, there are more than 50 villages, which create a market for fruit and horticultural products equal to that of any other country. This is a considerable item in a thrifty farmer's surplus. Here also, can be obtained the luxuries which in a great many instances have become the necessaries of life, on very reasonable terms. We have no doubt, but that a farmer can obtain such family stores as he may desire, at our own village, upon as good terms, if not better, than he could procure the same in the city of New York. The millers, too, at this place, pay nearly as bigh for wheat as the great produce brokers do at New York.

Where then can be a more favorable location for farmers of the better class, than in Western New York

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RENSSELAER CO. HORTICULTURAL SOCIETY.

A meeting of the committee of this society was held at the Rensselaer House in Troy, on the 10th of May instant. Several early productions of the kitchen garden were exhibited. We gather the following particulars from the Troy Sentinel.

Mr. Alexander Walsh, of Lansingburgh, brought six very fine stalks of celery and lettuce, which had been preserved in the open ground through the winter, and are now flourishing vigorously.

Mr. David C. Norton, of the same town, presented six full grown cucumbers, of two varieties. Some of the long kind were nine inches in length. Mr. Norton also presented two bunches of good sized radishes, raised in the open ground.

Mr. Gerritt Peebles, of the same place, uncommon fine lettuce, from the open ground.

A great variety of beautiful and splendid flowers were exhibited.

Mr. G. B. Warren, of Troy, exhibited several varieties of tulips, large double hyacinths, moss pinks and violets.

Mr. Gerritt Peebles, of Lansingburgh, elegant narcissuses, snow-flake and grape hyacinths, and several beautiful varieties of polyanthus.

Mr. Alexander Walsh, of Lansingburgh, a thumb aloe, in full bloom, two varieties of periwinkle, a variety of fine hyacinths and tulips, ragged robin, and other flowers in full bloom.

Mr. John T. McCoun, of Troy, exhibited fine hyacinths, tulips, and narcissuses.

Mr. Albert P. Hart, of Troy, a superb collection of tulips and other flowers in full bloom.

We understand, says a Philadelphia paper, that the late race of the "Bonnets of Blue" and "Goliah," at New York, caused a large sum of money to change pockets—*twenty thousand dollars* comes to a single individual in Philadelphia.

The Greenfield Gazette states, that Mr. Amos Russell, of Deerfield, killed, March, 1st, five pigs, a few days less then a year old, which weighed when dressed, 285, 310, 321, 358 and 352 lbs; making in the whole, 1931. and including rough fat, 1703. He has since killed another pig 13-1-2 months old, which weighed, 496 lbs. and including rough fat, 518 lbs.